

Patent Claims

1. A brush seal for sealing a gap between a rotor (3) and a stator (1), with at least one brush ring (7) having a multiplicity of sealing bristles, and with at least two annular brush ring carriers (11, 9, 13) extending in the circumferential direction of the rotor (3), each brush ring (9, 13) being fixed between a first end face (15) of a first brush ring carrier (9) and a second end face (23) of a second brush ring carrier (13), characterized in that the second brush ring carrier (13) is directly fixed axially and radially to the first brush ring carrier (9).
2. The brush seal as claimed in claim 1, characterized in that a slot (17) is formed between the brush ring carrier (11, 9, 13) mounted first and the second brush ring carrier (11, 9, 13), and in that the slot (17) serves for receiving the brush ring (7, 41).
3. The brush seal as claimed in claim 1 or 2, characterized in that the second brush ring carrier (9, 13) is fixed to the first brush ring carrier (11, 9) by means of a snap connection, in particular an unreleasable snap connection.
4. The brush seal as claimed in one of the preceding claims, characterized in that at least one first brush ring carrier (11) has on its first end face (15) a shoulder (19) with a circumferential slot (21), in that at least one second brush ring carrier (13) has on its second end face (23) a continuous projection (25), and in that the projection (25) of the second brush ring carrier (13) cooperates with the shoulder (19)

and with the circumferential slot (21) of an adjacently arranged first brush ring carrier (11).

5. The brush seal as claimed in one of the preceding claims, characterized in that at least one brush ring carrier (9) has on its first end face (15) a shoulder (19) with a circumferential slot (21), in that the at least one brush ring carrier (9) has on its second end face (23) a continuous projection (25), and in that the projection (25) of the second end face (23) of the at least one brush ring carrier (9) cooperates with the shoulder (19) and with the circumferential slot (17) of an adjacently arranged further brush ring carrier (9, 11).

6. The brush seal as claimed in one of the preceding claims, characterized in that one brush ring carrier (11) is held at least indirectly on the stator (1).

7. The brush seal as claimed in one of the preceding claims, characterized in that the circumferential slot (21) is located in the brush ring carrier (11, 9) mounted first on the stator (1), and the latching nose (27) is located in the newly pushed-on brush ring carrier (9, 13).

8. The brush seal as claimed in one of the preceding claims, characterized in that the brush ring carrier or brush ring carriers (11, 9, 13) have a support plate (29) which extends in the direction of the rotor (3), and in that the brush rings (7, 41) bear axially against the support plate (29).

9. The brush seal as claimed in one of the preceding claims, characterized in that the brush ring carrier or brush ring carriers (11, 9, 13) have a protective ring (33).

10. The brush seal as claimed in claim 8 or 9, characterized in that the support plate (29) and/or the protective ring (33) are designed to be radially elastic.

11. The brush seal as claimed in one of the preceding claims, characterized in that the brush seal is designed as a radial seal or axial seal.

12. The brush seal as claimed in one of the preceding claims, characterized in that the rotor (3) to be sealed off has at least one continuous bead (37), and in that the at least one bead (37) is arranged so as to be offset with respect to the brush ring or brush rings (7, 41).